

We claim:

1. A method of producing carbon nanoparticles comprising the steps of:

- (a) providing an electrochemical bath of an organic solution disposed between silicon
5 wafers coated with iron and nickel nanoparticles as electrodes;
(b) imposing a direct current potential volts between said electrodes; and,
(c) imposing a current density of approximately 12 milliamps per square centimeter
between said electrodes for a time sufficient that carbon nanoparticles are developed
on said electrodes.

10 2. The method according to Claim 1 wherein said organic solution is a mixture of
methanol and benzyl alcohol.

15 3. The method according to Claim 1 wherein said organic solution is at a temperature of
from approximately 10 to approximately 80 degrees C.

4. The method according to Claim 3 wherein said organic solution is at a temperature of
from approximately 25 to approximately 60 degrees C.

20 5. The method according to Claim 1 wherein said organic solution is at room
temperature.

6. The method according to Claim 1 wherein said organic solution is at an electric field
of from approximately $5 (10^4)$ to approximately $5 (10^5)$ dc volts / meter.

25 7. The process according to Claim 6 wherein said organic solution is at an electric field
of approximately $2 (10^5)$ dc volts / meter.

8. An apparatus for producing carbon nanoparticles comprising the components of:

- 30 (a) a container suitable for housing an electrochemical bath of an organic solution
disposed between two electrodes;

- (b) an anode and a cathode coated with catalytic nanoparticles as the electrodes in said container; and,
- (c) means for imposing a direct current potential volts between said electrodes.

- 5 9. The apparatus according to Claim 8 wherein said means provides:
 means for imposing a current density of approximately 12 milliamps per square
 centimeter between said electrodes for a time sufficient that carbon nanoparticles are
 developed on said electrodes.
- 10 10. The apparatus according to Claim 8, wherein each of the carbon nanoparticles
 include:
 a nanotube having a diameter of up to approximately 100 nm.
- 15 11. The apparatus according to Claim 8, wherein each of the carbon nanoparticles
 include:
 a nanotube having a length of up to approximately 50 μm ,